

Claims:

1. A plasma display panel comprising:
 - a panel unit containing a large number of discharge cells;
 - a heat sink unit which includes a substrate and a plurality of fins extending from the substrate, the substrate of the heat sink unit being bonded along a back substrate of the panel unit for dissipating heat generated by the panel unit; and
 - a thermal interface interposed between the back substrate of the panel unit and the substrate of the heat sink unit for connecting the panel unit and the heat sink unit;wherein the substrate of the heat sink unit is formed of an anisotropic material for transferring the heat from the panel unit directly through the heat sink unit substrate to the fins of the heat sink unit.
2. The plasma display panel as claimed in claim 1, wherein the thermal interface comprises carbon nanotubes, which form heat conduction channels perpendicular to surfaces of the thermal interface which contact the panel unit and the heat sink unit.
3. The plasma display panel as claimed in claim 1, wherein the heat conduction axis of the heat sink substrate material is parallel to the direction of extension of the fins.
4. The plasma display panel as claimed in claim 1, wherein the thermal interface is made of a material including carbon nanotubes.
5. The plasma display panel as claimed in claim 1, wherein the thermal interface is about 0.1 mm thickness.
6. The plasma display panel as claimed in claim 1, wherein the fins are made of aluminum material.
7. A plasma display panel comprising:
 - a panel unit containing a large number of discharge cells;

- a heat sink unit which includes a substrate, the substrate of the heat sink unit being bonded along a back substrate of the panel unit for dissipating heat generated by the panel unit; and
- a thermal interface interposed between a back substrate of the panel unit and the substrate of the heat sink unit for thermally connecting the panel unit and the heat sink unit; wherein
- the thermal interface comprises carbon nanotubes, which form heat conduction channels perpendicular to surfaces of the thermal interface which contact the panel unit and the heat sink unit.
8. The plasma display panel as claimed in claim 7, wherein said heat sink further includes a plurality of fins extending from the substrate.
9. The plasma display panel as claimed in claim 8, wherein said fins extend perpendicular to said surfaces of the thermal interface.
10. A method of making a plasma display panel, comprising steps of:
- providing a panel unit containing a large number of discharge cells;
- providing a heat sink unit which includes a substrate and a plurality of fins extending from the substrate, the substrate of the heat sink unit being bonded along a back substrate of the panel unit for dissipating heat generated by the panel unit; and
- filling a space between the back substrate of the panel unit and the substrate of the heat sink unit with a thermal interface for thermal connection therebetween; wherein
- at least one of the substrate of the heat sink unit and the thermal interface is provided with an anisotropic character for efficiently transferring the heat from the panel unit through the heat sink unit substrate to the fins of the heat sink unit in a specific one direction.
11. The method as claimed in claim 10, wherein said fins extend perpendicular to said substrate of the heat sink unit.

12. The method as claimed in claim 11, wherein said specific one direction is perpendicular to said substrate of the heat sink.